



# Monetary Policy Report





# Monetary Policy Report\*



<sup>\*/</sup> This is a translation of a document originally written in Spanish. In case of discrepancy or difference in interpretation the Spanish original prevails. Both versions are available at www.bcentral.cl.

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<sup>\*/</sup> The statistical closing date of the Monetary Policy Report was 15 December 2009.

# Preface

The main purpose of the Central Bank of Chile's monetary policy is to keep inflation low, stable and sustainable over time. Its explicit commitment is to keep annual CPI inflation at around 3% most of the time, with a tolerance range of plus or minus one percentage point. To this end, the Central Bank uses monetary policy to keep projected inflation at about 3% annually for a policy horizon of around two years. Controlling inflation is the means by which monetary policy contributes to the population's welfare. Low, stable inflation improves economic performance and growth, while preventing the erosion of personal income. Furthermore, monetary policy's focus on inflation targeting helps to moderate fluctuations in domestic output and employment.

The main purposes of this *Monetary Policy Report* are: (i) to report and explain to the Senate, the government and the general public the views of the Central Bank of Chile's Board Members on recent and expected inflation rates and their consequences for the conduct of monetary policy; ii) to publicly disclose the medium-term analytical framework used by the Board to formulate monetary policy; and (iii) to provide information that can help guide economic agents' expectations regarding future inflation and output trends. This *Report* complies with the requirement under the Bank's Basic Constitutional Act to report to the Senate and the minister of finance (Section 80).

Beginning with this issue, the *Monetary Policy Report* is published four times a year, in March, June, September, and December, and focuses on the main factors that influence the inflation trajectory. These include the international environment, financial conditions, prospects for aggregate demand, output and employment, and recent price and cost developments. The last chapter summarizes the results of this analysis in terms of both prospects and risks affecting inflation and economic growth over the next eight quarters. Several boxes are included to provide more detail on issues that are relevant for evaluating inflation and monetary policy

This *Report* was approved at the Board's session on 16 December 2009 for presentation to the Senate Finance Committee on the same date.

# The Board

# Summary

Global and domestic recovery has continued, in general terms, according to projections in September's *Monetary Policy Report*, in tandem with resumed confidence of households and firms and with highly expansionary fiscal and monetary conditions. In Chile, output began increasing in the third quarter, the worsening of the labor market has ceased and financial conditions have become slightly less restrictive. Inflation is still in negative territory and even somewhat below earlier forecasts. In a scenario of persistent output gaps and reduced inflationary pressures, the Board has reiterated that it will hold the monetary policy interest rate (MPR) at its minimum level at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

Internationally, third quarter data show output growth in many countries, exceeding projections. Commodity prices have risen, in line with prospects of higher levels of global output and the depreciation of the dollar. Stock markets have also benefited from reduced uncertainty and the strong monetary stimulus. Consensus projections for global growth in 2010 have revised the recovery up, to 4% in the two-year period 2010-2011. Nonetheless, the Board believes that the risks of a less vigorous economic performance are still latent.

The evolution of domestic demand continued to be driven by the significant reduction in inventories, which went beyond September predictions and the realities of other economies. With respect to the third quarter of 2008, inventory depletion has subtracted 4 percentage points from domestic demand. The causes of this collapse in inventories are not easy to decipher, but a reasonable explanation seems to be that it responded to the strong initial reaction of producers and importers to global uncertainty and the possibility of substantially slower aggregate growth in the future. Most recently, some indicators permit to forecast that the inventory cycle is entering a new phase, where part of the depletion is a reaction to sales growth outpacing production. Although the stop in inventory depletion will have by itself a positive effect on GDP, how much and when this component will contribute to GDP growth is still uncertain, and will depend on the enterprises' objective as to the level of inventories they wish to maintain over their cyclical recovery processes. In any case, there is high probability that such level will be lower than was estimated before the global crisis hit.

# International baseline scenario assumptions

			-	
	2008	2009 (f)	2010 (f)	2011 (f)
		(annual char	nge, percent	)
Terms of trade (ToT)	-15.0	0.3	4.7	-2.3
Trading partners' GDP (*)	2.9	-0.8	3.6	3.8
World GDP at PPP (*)	3.0	-0.8	3.8	4.2
World GDP at market exchange rate (*)	1.8	-1.8	3.1	3.4
External prices (in US\$)	12.2	-6.0	9.6	1.0
		(lev	els)	
LME copper price (US¢/lb)	316	230	270	270
WTI oil price (US\$/barrel)	100	62	80	86
Parity price of gasoline (US\$/m <sup>3</sup> ) (*)	739	472	607	641
US\$ libor (nominal, 90 days)	2.9	0.7	0.9	3.2

(\*) See glossary for definition. (f) Forecast.

Source: Central Bank of Chile.

### Economic growth and current account

	2007	2008	2009 (f)	2010 (f)		
		(annual char	change, percent)			
GDP	4.7	3.2	-1.9	4.5 - 5.5		
National income	7.1	3.8	-2.3	7.5		
Domestic demand	7.8	7.4	-7.4	8.9		
Domestic demand						
(w/o change in inventories)	8.2	7.9	-3.3	4.6		
Gross fixed capital formation	12.0	19.5	-16.1	8.2		
Total consumption	7.1	4.2	1.5	3.5		
Goods and services exports	7.6	3.1	-4.1	5.4		
Goods and services imports	14.9	12.9	-15.7	14.3		
Current account (% of GDP)	4.4	-2.0	2.1	0.6		
		(US\$ r	nillion)			
Current account	7,189	-3,440	3,300	1,200		
Trade balance	23,635	8,846	13,100	13,000		
Exports	67,666	66,455	52,600	60,900		
Imports	-44,031	-57,610	-39,500	-47,900		
Services	-975	-646	-1,100	-1,000		
Rent	-18,595	-14,563	-11,300	-13,700		
Current transfers	3,123	2,924	2,600	2,900		

(f) Forecast.

Source: Central Bank of Chile.

Private consumption has been the domestic demand component least affected by the crisis, and is expected to close 2009 with a slight increase, induced by non-durable consumption. Durable consumption has also picked up, as shown in sales indices for durable goods and cars. Consumer expectations, as measured by the consumer perception index, IPEC, have turned optimistic in the latest surveys, after two and a half years in the pessimistic zone. The countercyclical stimulus of fiscal and monetary policies has played a part in this behavior of consumption. For the purposes of the baseline scenario, this *Report* considers the fiscal policy scenario contained in the Budget Law.

The drop in external demand has reflected in export volumes, which are forecast to decline by close to 3% this year. However, in the past few quarters, two facts stand out: the improved performance of mining shipments, on one hand, and the much deteriorated salmon exports, on the other. Both factors, especially the latter, have had a significant impact on GDP.

Gross fixed capital formation is forecast to end 2009 posting a decline of more than 15%, sharper than foreseen in September, which will revert partially in 2010. Despite this recovery in investment, the ratio of investment to GDP will be lower than in 2008, as it will go from almost 30% that year to around 26% in 2010, both figures at prices of 2003.

This *Report's* baseline scenario foresees the Chilean economy growing between 4.5% and 5.5% in 2010, after falling 1.9% in 2009. In any case, growth foreseen for the Chilean economy, whose output already began to increase in the third quarter of 2009, will be insufficient to fully undo the gaps over the policy horizon. This scenario, relevant for estimating the inflationary pressures that the local economy will face and the future path of the MPR, is not substantially different from the conditions foreseen in other economies. In this setting, the current account of the balance of payments will post a surplus of 0.6% of GDP in 2010, somewhat smaller than projected in September.

As for costs pressures, imported inflationary pressures have remained well contained. Commodity prices have gone up in world markets. Chile's unit import value indices are still low. Baseline projections for the average prices of oil and copper are revised up. The nominal peso-dollar exchange rate, in contrast, has appreciated substantially during the fourth quarter. While from a longer perspective the peso behaves largely in response to the global depreciation of the dollar, since June it has incorporated an idiosyncratic component. Initially, since mid-year, the peso decoupled itself from the global trend of emerging countries' currencies that strengthened with respect to the dollar. This decoupling coincided with the build-up of carry trade positions by non-residents and higher exposure of institutional investors to the dollar, which may have been favored by the low level of the MPR and the complementary monetary policy actions being adopted. Towards October, some of these operations eased, and the peso aligned itself with the path of other emerging markets' currencies. Nevertheless, and considering the nominal exchange rate and parities prevailing at the statistical closing of this Report, the real exchange rate (RER) stands at 91 (using 1986=100), within the range of values believed to be consistent with long-term fundamentals. The baseline scenario in this Report uses as a working assumption that the long-term RER is similar to its current level. This RER is nearly 6% lower

than the one observed at the statistical closing of last September. This strong appreciation in real terms has a substantial effect on the projected path of inflation over the coming months.

Labor cost pressures show no significant changes. Y-o-y growth in nominal wages has continued to fall, responding to the drop in inflation originating in their habitual indexation. Real wages have increased thanks to the large drop in CPI inflation, although when measured using the GDP deflators excluding natural resource sectors they post a decline. The annual variation of unit labor costs increased due to the sharp cyclical fall in measured labor productivity. Said fall has been partly undone and is expected to continue to do so over the projection horizon. Trend growth projections are the same as in the previous *Report*: between 4.0% and 4.5% in the next two years. Beyond the projection horizon, a gradual return is expected to trend growth figures approaching 5%, to the extent that investment recovers and the general cost structure of the economy continues to reflect the lower energy costs.

In Chile, y-o-y inflation has been on the negative side since August. The Board estimates that CPI inflation will close 2009 with an annual variation of -1.4%, to become positive over the course of the first half of 2010 and gradually converge to 3.0% in the monetary policy horizon, this time the last quarter of 2011. The progressive—yet incomplete—closing of the output gap that is expected in the projection horizon, together with higher commodity prices, are behind headline inflation increasing faster than the core measures. Y-o-y changes in CPIX and CPIX1 will stay in negative figures for a few months longer than the CPI, and will converge to the target later than headline inflation. Market inflation expectations remain at 3% in the medium term, despite low inflation expected for the next few months.

Various factors determine the convergence of inflation to the target. In particular, this projection relies on the external scenario steadily adding a boost to economic activity, with confidence recovering and global financial conditions gradually normalizing and permitting domestic and international demand to pick up. Domestically, monetary policy will remain expansionary, which, together with the less stringent financial conditions, also backs this projection.

The scenario outlined here is, as usual, subject to various risks. On one hand, doubts persist about how robust will the global economic recovery ultimately be. The latest data have been better than predicted in several economies, but financial markets continue to react with volatility in the face of unforeseen events, and credit losses are still being absorbed by financial intermediaries. The labor market situation is still complex in several economies, which, combined with the de-leveraging process still under way, adds doubts about the capacity of consumption and investment around the world to regain strength. Attention must also be paid to the relevant risk surrounding the way in which central banks and governments will withdraw unconventional monetary policies and fiscal and financial stimulus packages, and how this could affect the operation of financial markets. A further risk draws from the challenges posed for macroeconomic management by portfolio rebalancing or external savings reallocation to emerging economies, causing major increases in capital flows. The above combines, as has been said repeatedly, with uncertainty surrounding the persistent global imbalances. Domestically,

# Inflation

(annual	change,	percent)
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	2008	2009 (f)	2010 (f)	2011 (f)
Average CPI inflation	8.7	1.6	1.0	2.7
December CPI inflation	7.1	-1.4	2.5	
CPI inflation in around 2 years (*)				3.0
Average CPIX inflation	8.4	2.8	0.3	2.5
December CPIX inflation	8.6	-1.5	1.9	
CPIX inflation in around 2 years (*)				3.0
Average CPIX1 inflation	7.8	2.8	0.8	2.6
December CPIX1 inflation	7.7	-0.6	2.1	
CPIX1 inflation in around 2 years (*)				3.0

(f) Forecast

(\*) Inflation projected to the fourth quarter of 2011.

Source: Central Bank of Chile.

CPI inflation forecast (\*)



(\*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the basline scenario are included. These intervals summarize the risks on inflation as assessed by the Board. The projection scenario incorporates as a methodological assumption that the MPR will be kept at its minimum level at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

Source: Central Bank of Chile.

CPIX inflation forecast (\*)



(\*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the basline scenario are included. These intervals summarize the risks on inflation as assessed by the Board. The projection scenario incorporates as a methodological assumption that the MPR will be kept at its minimum level at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

Source: Central Bank of Chile

it is possible that in the short term economic activity will rebound at a faster pace than foreseen due to a swifter accumulation of inventories.

Also noteworthy is the risk associated to the trend of exchange rates and its effects on the RER. As was pointed out, the RER has fallen from September, which has direct consequences on projected inflation. The Board reiterates that it closely monitors the implications of the RER level on inflation and compliance with its monetary policy objective. If anything, it is estimated that the RER is within the range considered to be consistent with its long-term fundamentals.

The materialization of any of these risk scenarios will have direct effects on the domestic growth and inflation scenarios foreseen by the Board. After consideration of the aforesaid elements, the Board believes that the balance of risks for inflation and growth are unbiased.

It is worth noting, again, that these projections use the working assumption that the MPR will be held at its minimum level of 0.50% at least through the second quarter of 2010, and that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

The Board reiterates that it will continue to use its policy instruments with flexibility in order for projected inflation to stand at 3% over the policy horizon.

# Box: Unconventional monetary policy

In 2008 and 2009, several central banks, including the Central Bank of Chile, aggressively reduced their benchmark interest rates to their minimum and also implemented unconventional monetary policy measures (figure 1). In some cases, because of their need to support financial systems that were severely affected by the global financial crisis. In others, such as Chile, because the low inflationary pressures obeying to the drop in commodities prices and the widening of output gaps represented a risk to meeting the inflation target within the policy horizon, in a context of a monetary policy rate that was already at its lower limit.

# Figure 1



Sources: Central banks of each country.

In July, the Board of the Central Bank of Chile reduced the MPR to 0.50%, which was considered the lowest level possible without affecting the normal functioning of the money market. The Board also announced that it would keep the MPR at that level for a prolonged period of time. To reinforce this message and align the yield curve with a path considered consistent with meeting the inflation target, the Board adopted complementary policy measures. These included establishing a term liquidity facility (FLAP, see glossary), through which banking firms could access liquidity at 90 and 180 days at the prevailing MPR. The required collateral for using this facility was the same as for overnight operations, including time deposits. The Board further announced adjustments to the debt issuance calendar and to the financial access conditions on dollar swaps, so as to bring rates to levels consistent with the installation of the FLAP and to align incentives for its use.

These measures—especially the FLAP—had an immediate impact. The swap curve flattened significantly, which, together with the drop in Central Bank bond rates, implied a reduction in the expected MPR on the order of 100 basis points over the relevant policy horizon (figure 2). Simultaneously, time deposit rates recorded a similar drop. The September *Report* indicated that the interest rate path implicit in financial asset prices was consistent with the path considered in the baseline scenario. The Board later specified that the MPR would be kept at its minimum until the second quarter of 2010.

### Figure 2



Source. Central Dark of Chile.

These unconventional policy measures affected not only the interest rate structure, but also the monetary aggregates. First, the FLAP caused an expansion of local-currency assets on the Central Bank's balance sheet, by generating credit to the banking institutions. As of October, this expansion was on the order of Ch\$960 billion (around US\$1.76 billion)<sup>1</sup>/ (figure 3).

In Chile, the cash balances held by banking institutions with the Central Bank only reflect their mandatory cash reserves. Accordingly, the balancing entry of the FLAP on the liability side of the Central Bank's balance sheet was not

<sup>&</sup>lt;sup>1</sup>/ In October, the amount committed in the FLAP was Ch\$1.758 trillion. The growth in financial assets is lower, since the FLAP replaced some of the financing obtained through repos. As of 9 December, the amount committed in the FLAP had reached Ch\$3.185 trillion.

a significant increase in new issues or the monetary base. Rather, the higher liquidity balances from the use of the FLAP are kept in the overnight deposit facility and in short-term Central Bank discount promissory notes, which is financially more expedient for the banking institutions (figure 4). The monetary aggregates also expanded substantially. After adjusting for seasonality, M1, M2, and M3 grew at annualized rates of between 7% and 16% between July and November 2009, consistently with the low interest rates.

#### Figure 3

Liquid assets on the Central Bank balance sheet with bank counterparties (1)



Total assets excluding international reserves, subordinate debt, and other assets.
Point indicates the amount on 9 December 2009.

Source: Central Bank of Chile.

### Figure 4

Liabilities on the Central Bank balance sheet (Ch\$ billion) Monetary base Monetary policy promissory notes and debt management
Banks in foreign currency Banks in national 21,000 currency Treasury and others Equity 17.000 13.000 9.000 5.000 1.000 -3,000 May Sent 08 May 09 May Sept Sent

Source: Central Bank of Chile.

Over the last quarter of the year, the short-term yield curve took a steeper slope, for many reasons. First, the improved global financial environment boosted the appetite for risk and increased the risk-free rates. Second, the fact that the 180-day maturity of the FLAP will begin to coincide with the second quarter of 2010—which the Board has identified as the period for holding the MPR unchanged—probably raised doubts about how and when the complementary policy measures would be adjusted. In addition, the long-term interest rate level rose in response to the outlook for greater public debt issues in 2010.

To mitigate the uncertainty about the absorption of the unconventional measures and send the correct monetary policy signals to the market, in November the Board decided that, starting on 14 December, the maximum maturity in the FLAP would be reduced from 180 to 150 days, and it would continue to be reduced by 30 days each month until full extinction in May 2010. This announcement has been well taken in by the market. Interest rates did not change substantially, while analysts' forecasts about the timing and magnitude with which the MPR would start on a path toward normalization were adjusted to a pattern more consistent with the Board's communication.

In sum, the use of the FLAP was consistent with the inflationtargeting regime on which monetary policy is based and with the need to reinforce the decision to maintain the MPR at its lowest limit for a prolonged period of time. The use of unconventional measures was thus aimed at complementing the usual conduct of monetary policy. When the measures were implemented, the market yield curve was higher than was considered consistent with the inflation target. Had that situation continued, it would have interfered with meeting the target by eroding some of the monetary stimulus needed to close the gaps. The Board reiterates that its decision to announce the extinction of this facility in May 2010 does not represent a mechanical decision to begin raising the MPR at that point, but rather reflects the need to recover flexibility for conducting monetary policy in the current scenario.

# Monetary policy decisions in the past three months

# Background: September 2009 Monetary Policy Report

In September, the inflationary pressures facing the Chilean economy were lower than projected in May. Output had deteriorated further in the second quarter, with increases in excess capacity. The external situation was showing signs of stabilizing. The macroeconomic scenario that was projected by mid-year had revealed risks that inflation would stay below the 3% target beyond the usual policy horizon. Confronted with these risks, the Board confirmed the policy announced in July. That is, that it would hold the monetary policy rate (MPR) at its lowest limit of 0.5% for a prolonged period and would maintain the complementary measures to reinforce this decision and align financial asset prices with the monetary stimulus.

The baseline scenario projected that output would register a y-o-y growth rate between -2.0 and -1.5% in 2009. This forecast assumed an increase in output in the second half, with annualized quarterly growth above 6%, although annual growth rates would continue to be negative for some months. For 2010, the baseline scenario assumed that GDP would grow between 4.5 and 5.5% annually, which would generate a progressive, though partial, closing of the output gap in 2010 and 2011. This progressive closing of the gap—and, to a lesser extent, the higher external inflation—would push inflation upward, converging to the target toward 2011. Because of its greater persistence and the lagged effect of the cycle, core inflation indicators would record negative annual rates through mid-2010 and then rise to 3% toward 2011.

# September-November meetings

In September, the information available at that moment suggested that the most plausible option was to maintain the prevailing monetary policy rate. The figures of last month pointed to an increase in economic activity starting in the second half, a progressive normalization of financial indicators, and a recovery in expectations in Chile and the world. There were risks, however, surrounding the speed of the national economy's recovery. Some components of domestic demand were beginning to pick up, and there was room for a recovery dominated by domestic factors, but its sustainability in the medium term depended fundamentally on the evolution of external demand and the international economy, which was rather uncertain. Inflation was contained at very low levels. The forecasts implicated in the *Monetary Policy Report*  indicated that inflation would gradually converge to the target, after several months in negative territory. The biggest risk was that inflation would stay below the target longer than desired. Some degree of uncertainty persisted regarding the evolution of inflation beyond the short term, but output trends supported the prospect of convergence to the target in the medium term.

On the external front, attention began to shift toward the risks, because while the securities, credit, and commodities markets had recovered over the course of the year, they were prone to corrections due to the prevailing uncertainty. Risk factors included the impact of monetary normalization on the financial and exchange markets and the strength and sustainability of the recovery in the medium term. The bimodality of the growth outlook for the United States was cause for concern. It reflected an unusually broad range of forecasts for the global economy. This required close attention in order to determine the optimal time to begin withdrawing the monetary stimulus. The Chilean labor market was just beginning to stabilize. Interest rates had continued to fall, while the stock of loans still showed no sign of recovery. This situation was likely to turn around in the second half, as the perception of risk eased and the economic recovery was secured. With regard to the decision on the monetary stimulus, macroeconomic performance was generally in line with forecasts, so the decision was upheld to keep a strong monetary stimulus for a prolonged period. The baseline scenario in the September Report considered an MPR path similar to that implicit in financial asset prices, with a normalization of the monetary stimulus beginning no earlier than the second quarter of 2010. This was consistent with leaving the monetary policy instruments unaltered relative to their current conditions. The Board decided to keep the monetary policy interest rate at 0.5% and to maintain the complementary monetary policy measures.

In October, the macroeconomic scenario was slightly more positive than forecast in the September *Report*. The data on inflation went in both directions, albeit by lesser magnitudes. The future trend of core inflation exceeded projections somewhat, while headline inflation fell short. The current data thus seemed insufficient to change the monetary policy scenario depicted in the *Monetary Policy Report*. The most plausible option was to hold the MPR at its current level and to continue applying the complementary measures adopted in July. The output figures for the month were consistent with a recovery. The September inflation had surprised the market, but it was within the range forecast in the *Report* and did not alter the short- or mediumterm scenarios for this variable. The MPR forward curve had

risen markedly in the last month, indicating that the market was internalizing a more positive scenario than the one in the Report, with an earlier normalization of the MPR at the start of the first quarter of 2010. The U.S. dollar had continued depreciating against the majority of the world's currencies, although the Chilean peso was one of the exceptions. Chile's real exchange rate was already marginally above the level considered compatible with its long-run fundamentals. Numerous elements pointed to a relatively slow and uncertain recovery after the initial rebound of world growth. These included doubts about the banks' position after the crisis, the overindebtedness of households in the United States, concerns about the fiscal position of the U.S. economy and the evolution of the dollar, and the inability of developing countries with abundant savings to compensate for the drop in consumption in the United States. Domestically, financial conditions began to show signs of improving at the margin. Credit continued to be weak, but some components showed signs of recovery in the latest data. The pass-through of the MPR cuts could largely have concluded, but there was room for new interest rate cuts, conditional on a continued recovery and a reduction in credit risk.

With regard to the monetary stimulus decision, the most recent information seemed to point to a note of increased optimism, but the cautious approach was to maintain the rate at its lowest limit for a longer period, beyond the adjustment seen in the market expectations curve. As long as the economic recovery was tenuous, monetary policy had to move carefully, because the risks of moving too fast were great whereas the risks of falling behind were lower and could always be quickly corrected. The use of unconventional measures had thus been aimed at complementing-not replacing-the usual conduct of monetary policy. Therefore, adjusting these measures could be justified if they were deemed to be contributing (or not) to the adopted monetary policy decision, in terms of the MPR path in the policy horizon. In this context, the Board decided to keep the monetary policy interest rate at 0.5% and to maintain the complementary monetary policy measures.

For November, the short-term prospects of a drop in annual GDP were worse than forecast in October and, although similar to September's, suggested that the closing of the output gaps would be slower than previously foreseen. Revisions to output data and the September figure itself kept the uncertainty about the speed of the economic recovery. Inflation indicators were inconclusive. The inflation trend was very close to projections, and toward the medium term, the higher fuel prices in dollars counteracted the real appreciation of the peso. However, the current data still were insufficient to change the monetary policy scenario depicted in the *Monetary Policy Report*. Then, the most plausible option was to keep the MPR at its current level and to signal more clearly how the complementary measures would be adjusted to stay in line with the scenario outlined in September.

At this meeting, the six-month horizon ended in May, so it was possible to evaluate a change in the term liquidity facility (FLAP, see glossary). The outlook for somewhat higher world growth rested mainly on the performance of emerging Asia, while the world economy remained fragile and vulnerable. There were still additional factors adding uncertainty to the evolution of the world economy, including the weak dollar and the withdrawal of the stimulus policies. Commodities prices had increased, in the context of a depreciated dollar and a recovery of economic activity. Nevertheless, It can not be ruled out that the recent data could be reflecting a risk premium, given the possibility that the dollar would depreciate further. Domestically, the peso had appreciated in recent weeks, which partly reflected the international depreciation of the dollar but could also be a reversal of the peso depreciation recorded in the third quarter. The financial markets continued to forecast a higher MPR path than assumed in the baseline scenario of the Report. This divergence could be a sign of uncertainty about the process of monetary policy normalization. With regard to the monetary policy decision, the elimination or modification of the FLAP did not represent a commitment to the interest rate path, but rather sought to regain the necessary flexibility for conducting monetary policy. The Board therefore decided to hold the MPR at 0.5%. It further decided to reduce the maximum maturity of the FLAP from 180 to 150 days as of 14 December 2009 and to continue shortening it 30 days a month, so as to close the facility in May 2010.

# I. International scenario

## Table I.1

World growth (\*)

(annual change. percent)

	Ave. 90-99	Ave. 00-07	2008 (e)	2009 (f)	2010 (f)	2011 (f)
World	2.9	4.2	3.0	-0.8	3.8	4.2
World at market NER	2.4	3.2	1.8	-1.8	3.1	3.4
United States	3.2	2.6	0.4	-2.5	2.7	2.9
Euro area	2.2	2.1	0.7	-3.9	1.2	1.4
Japan	1.5	1.7	-1.2	-5.3	1.4	1.9
China	10.0	10.1	9.0	8.6	9.6	9.4
Rest of Asia	5.5	5.0	2.9	-0.3	4.5	4.7
Latin America	2.7	3.6	4.3	-2.5	3.6	3.7
Commodities exp.	2.7	3.1	1.1	-1.2	2.6	3.3
Trading partners	3.1	3.6	l 2.9	-0.8	3.6	3.8

(e) Estimate.

(\*) See glossary for definition.

Source: Central Bank of Chile. based on a sample of investment banks. Consensus Forecasts. and the International Monetary Fund.

## Figure I.1

Quarterly change in inventories (\*) (percent of GDP)



(\*) Seasonally adjusted series.

Sources: Bloomberg and CEIC Data.

This chapter analyzes the recent evolution of the world economy and the outlook for the next two years. It also describes the most likely external scenario relevant to the Chilean economy. as well as the main risks.

# World growth

In the past few months, the ongoing recovery of the international economy has essentially been in line with the forecasts in the September *Report*, especially in the emerging economies. Activity data for the third quarter were unexpectedly high in various economies. leading to a market consensus that the drop in output this year would be somewhat smaller than projected in September (table I.1). Indicators for the current quarter, such as manufacturing production, suggest that global activity will continue to recover. Business confidence is at optimistic or expansionary levels in many economies. As in Chile, the sharp contraction of inventories was one of the basic components in the steep drop in demand and output. Data for the third quarter and partial indicators for the end of 2009 indicate that inventory replenishment has begun, which has probably pushed up manufacturing production in a number of countries (figure I.1). Within this scenario, the depreciation of the dollar has been sharper than market consensus forecasts.

Durable goods consumption has also started to show signs of recovery. with increased sales in a several countries. New car sales, in particular. have risen substantially. after contracting drastically in late 2008. Housing prices are also picking up. However. some of these trends reflect sector-specific government incentive policies. The emerging economies—in particular. Asia. led by China. and some South American countries—are posting rapid growth rates. The recovery of activity is also visible in world trade. with import and export volumes posting quarter-on-quarter increases in the last two quarters.

For 2010. growth projections are revised up in most economies. The growth outlook for the United States continues to display the bimodal distribution seen in September. reflecting the high degree of uncertainty about the future course of that economy is still present. For 2011. aggregate forecasts have not changed since September. although the composition has been adjusted to incorporate assumptions of somewhat slower growth for the United States.

<sup>(</sup>f) Forecast.



Source: Bloomberg.

#### Figure I.3

Net investment flows to emerging economies (US\$ billion, in moving six-month windows. weekly data)



(\*) Emerging Europe. Middle East. and Africa. Source: Emerging Portfolio Fund Research.

In the medium term. concerns persist about the duration and pace of the global economic recovery. especially in the United States. Several factors explain the continuing uncertainty. among them. the weak labor market in many economies. stand out. This together with the ongoing deleveraging process among households raises considerable doubts about the performance of private investment and consumption. The more difficult labor market has been accompanied by a reversal of the improved consumer confidence in some countries. Business confidence displays a stronger recovery. but the increased output generated by inventory replenishment could still dissipate. Another source of concern is the fiscal authorities' room for maneuver in applying a further significant stimulus on the economies. It seems clear that the option to repeat the magnitude of measures implemented in the past year is very low. In fact, public debt management in the United States and other developed economies has become a source of concern.

The way in which the central banks will withdraw the unconventional monetary policy measures and the subsequent effect on the functioning of the financial markets in some economies is another source of concern. beyond the fact that the monetary stimulus itself will probably be maintained for a prolonged period in many countries. The persistence and lack of agreement in the adjustment mechanisms for resolving the global imbalances is another underlying risk. The depreciation of the dollar could help improve the deficit position of the U.S. economy. but it probably will not be sufficient without a parallel adjustment in the value of some Asian currencies. Finally. it is not clear what kind of pressure the emerging economies will feel from the excess saving in Asia. in a scenario where the United States begins to increase its savings and rebuilds its wealth.

# **Financial markets**

The risk of systemic events has fallen substantially. although the global financial markets are still volatile. Their reaction to news of the real sector. especially when they represent a change from previous forecasts. illustrates the aforementioned doubts about the strength of the recovery process. However. relative to September. the stock indices have increased and risk premiums have fallen. While the liquidity conditions in the interbank market have continued to normalize. the banking system is still dealing with structural problems. Credit flows have not been completely reestablished. and financial conditions have only stopped tightening. without clearly showing signs of fewer restrictions. There is also the normal portfolio deterioration of a downward economic cycle. the risk in personal loans stemming from higher unemployment. and the underlying problems in sectors like commercial real estate. The financial reforms are progressing slowly. maintaining to the uncertainty about the regulatory framework that will govern the banking industry. The fragility of these markets is evident in the strong reaction of different asset prices to the disruptive news from state-owned firms in Dubai.

In several economies, the monetary policy interest rate remains at historically low levels, and some countries are also employing unconventional monetary policy measures to increase the monetary stimulus. In terms of the policy rate, a number of central banks have signaled that they will keep their benchmark rates low for a prolonged period. With regard to the

#### Figure I.4

Long-term interest rates in emerging economies (1) (percent)



JP Morgan Chase. (2) The BCP-5 rate.

#### Figure I.5



# Source: Bloomberg.

# Table I.2

U.S. dollar parities (1)

(index	2005 = 100	100)
--------	------------	------

Currency	15.09.08	Maximum	Depre- ciation (2)	Minimum	Apre- ciation (3)
			percent		percent
Australian dollar	965	1 120 /	3/1 1	83.0	-35.8
Brazilian roal	67.8	03.0	38.4	63.5	-32.0
Canadian dollar	07.0	107.9	21.5	01.0	-52.4
Chilean neso	00.7	121 /	21.3	04.0 87.6	-21.3
Colombian pasa	94.7 00 E	11115	20.2	79.0	-27.0
Colombian peso	107.2	151.2	26.0	/0.0	-30.1
Llungarian farint	07.5	131.5	41.0	06.6	-20.0
Hungarian Torint	95.5	130.5	40.4	90.0	-30.2
Indonesian rupian	101.9	136.2	33.7	100.6	-26.2
Israeli shekel	81.5	97.5	19.6	84.5	-13.3
Yen	101.8	104.5	2.7	84.1	-19.6
Mexican peso	95.7	138.6	44.9	112.5	-18.8
Norwegian krone	94.4	118.0	25.1	90.4	-23.4
New Zealand dollar	108.2	144.9	33.8	93.9	-35.2
Peruian peso	90.6	99.2	9.6	86.9	-12.4
Polish zloty	77.9	128.7	65.1	89.5	-30.4
Czech koruna	74.7	103.9	39.1	75.2	-27.6
Russian ruble	91.9	131.0	42.6	103.3	-21.1
Furo	9/5	108 1	14.4	80 0	-177

(1) Between 15 September 2008 and the close of this Report.

(2) Change between the maximum value recorded by the currency and its value on 15 September 2008.

(3) Change between the minimum and maximum value of each currency.

Source: Bloomberg.

complementary measures. some developed economies are taking the first steps toward a gradual withdrawal. while others continue to expand them. In Australia. Israel. and Norway. where output is perceived to be recovering strongly and inflation expectations are rising. the monetary authorities have started to withdraw the monetary stimulus. raising the benchmark interest rate. Nevertheless. there is a generalized perception that interest rates will be very slow to return to neutral levels or above (figure I.2).

In developed economies. long-term interest rates have not changed significantly between the two weeks prior to the statistical closing date of this *Report* and of the September *Report*. They fluctuated in the period. however. in response to news on output and inflation and changes in market players' appetite for risk. In general. financial conditions continue to improve for sovereigns. with lower financing costs for the corporate sector and governments. Sovereign spreads have returned to the levels recorded before September 2008 and. depending on the economy. values close to those of early 2007. Anyway, this has not been replicated in some economies for which there are doubts about the future management of fiscal policy. Portfolio investment flows to emerging economies continue to grow (figure I.3). Long-term interest rates in emerging economies have been heterogeneous: they have increased in Asia. been stable in Latin America. and continued falling in Eastern Europe (figure I.4).

The dollar has depreciated against most currencies. even beyond market expectations. Considering the basket of currencies of the main trading partners of the United States. the dollar has fallen 14% from its recent peak in early March 2009 and just under 3% since the statistical closing of the September *Report*. A comparison of the trends of the different currencies of a sample of economies reveals two well marked periods: a depreciation that started in September 2008 and continued through early 2009. reaching magnitudes of up to 65%. depending on the parity. followed by an appreciation of all the currencies in the sample. with fluctuations and differences in timing. and even some completely reversing the loss in value by the end of November 2009 (table I.2).

# **Commodity prices**

Commodity prices have increased since the last *Report*. most markedly in the case of metals—which have risen since the beginning of the year—and agricultural products. The reasons behind this trend include short-term supply problems. the prospect of a faster recovery in some markets (especially emerging Asia). and the low value of the U.S. dollar. The latter can be seen in commodity prices measured in euros or yen which do not show a comparable hike. but rather have been fairly stable since September (figure I.5).

The WTI oil price rose through mid-October. reaching around US\$80 a barrel. It then held steady through early December. when it began to fall. averaging around US\$75 a barrel thus far in the month. with figures nearing US\$70 at the margin. Based on futures contracts in the ten business days prior to the statistical closing of this *Report*. the baseline scenario assumes that the oil price will average US\$80 a barrel in 2010 and US\$86 a barrel in 2011. The copper price returned to over US\$3.00 a pound. and the forecast price is US\$2.70 for both 2010 and 2011. These prices are below the average

Sources: Central Bank of Chile and JP Morgan Chase.

## Figure I.6



Sources: Central Bank of Chile and Consensus Forecasts

### Figure I.7



(\*) The price of rice corresponds to No. 2 long-grain paddy. The price of corn corresponds to No. 2 yellow corn spot contracts. The price of wheat corresponds to No. 2 red soft winter spot contracts. The GSCI is the Cereals Index calculated by Goldman Sachs.

Source: Bloomberg

#### Table I.3

World inflation

(average annual change in local currency. percent)

	Ave. 1990-99	Ave. 2000-07	2008	2009 (f)	2010 (f)	2011 (f)
United States	3.0	2.8	3.8	-0.3	1.8	1.9
Euro area	2.3	2.2	3.3	0.3	1.0	1.5
Japan	1.2	-0.3	1.4	-1.1	-0.8	-0.3
China	7.8	1.7	5.9	-0.7	2.5	2.9
Australia	2.5	3.2	4.4	1.8	2.4	2.6
New Zealand	2.1	2.6	4.0	2.3	2.1	2.1
Argentina	253.7	8.9	8.6	6.1	7.4	8.2
Brazil	854.8	7.3	5.7	4.9	4.2	4.7
Mexico	20.4	5.2	5.1	5.4	4.7	4.2
EPI (*)	1.8	4.6	12.2	-6.0	9.6	1.0
LPI (*)	27.2	5.2	8.4	-1.4	4.7	2.6

(\*) See glossary for definition.

(f) Forecast.

Source: Central Bank of Chile. based on Consensus Forecasts and International Monetary Fund.

estimates of the investment banks. the majority of which are projecting a price of over US\$3.00 a pound in 2011 (figure I.6). Since October. various food prices have risen again. including rice. milk. corn. and wheat. Although they have not reached peak values of 2008. the trends should be monitored given their past impact on local inflation rates (figure I.7).

In the baseline scenario. commodity prices will be. on average. higher compared with September projections. This is in line with the rightward shift in the market forecast distributions for the prices of various commodities. However. risks exist for these price trends. including the possibility, on one hand. that these hikes reflect a faster. more intense world recovery than projected and. on the other. that they are not based on real fundamentals and will be reversed after a few weeks or months.

# World inflation

In the vast majority of economies. annual inflation rates have fallen to very low levels. with some even dropping into negative territory. There still are significant risks that inflation could stay too low for too long due to doubts about the strength of the world recovery. combined with the recent performance of the labor market and consumption. For 2010. forecasts show an upward trend only in Asia. They are stable for the aggregate of the developed economies and in Latin America. They show a reduction in Eastern Europe. because the closing of the output gaps seem unlikely in some of these economies (table I.3).

In the baseline scenario, the external prices relevant to the Chilean economy, measured in dollars (EPI), are projected to fall this year by somewhat less than was forecast in September. For 2010, the international depreciation of the dollar will offset the lower local inflation rates, such that the EPI will increase 9.6% in annual terms. Toward 2011, the dollar will appreciate and more than offset the higher local inflation rates, causing the EPI to rise 1.0% annually, which is a smaller increase than was forecast in the last *Report*.

# **II. Financial markets**



Source: Central Bank of Chile.

Figure II.2



Expected MPR in December 2010 in the EES

Source: Central Bank of Chile.

This chapter reviews the recent evolution of the main financial market variables from a monetary policy perspective.

# Monetary policy

The developments in the macroeconomic scenario in the past few months have confirmed the Board's decision to keep the MPR at its minimum level for a prolonged period. Accordingly, this baseline scenario uses as a working assumption that the policy rate will be held at its minimum level of 0.50% at least until the second quarter of 2010 and that the pace of its normalization will be comparable to the one of the Economic Expectations Survey (EES) of December. and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

The December EES indicates that the MPR will be at 2.5% in late 2010. whereas the expectations deduced from financial asset prices in the two weeks prior to the statistical closing of this *Report* put the MPR closer to 3% in the same period (figures II.1 and II.2). The difference widens toward the end of the projection horizon.

The difference between the expected MPR deduced from the forward curve and that obtained from surveys is not unusual compared with other episodes of projected MPR hikes (figure II.3). Several factors could explain the current gap. mainly related to risk premiums in the face of interest rate changes. These premiums could be higher in the current environment since interest rate expectations go only in one direction. as in 2008. The prospect of interest rate increases is combined with expectations for the issuance of sovereign debt in 2010 and the exit of investors from the local market as external markets recover. which affect bond prices. Consequently. current expectations for the MPR are considered less informative than usual.

In November. the Board announced the calendar for withdrawing the complementary monetary policy measures adopted in July. So. the Board decided to reduce the maximum term of the FLAP from 180 to 150 days as of 14 December 2009 and to continue reducing it by 30 days a month. in order to extinguish access to this facility in May 2010. The use of this policy tool was consistent with the inflation-targeting regime on which monetary policy is based and with the need to reinforce the decision to maintain the MPR at its minimum level for a prolonged period of time (box: Unconventional monetary policy).

#### Figure II.3

MPR and differences in expectations at one and two years out  $(\ensuremath{^*})$ 



(\*) The red and green bars represent the differences between the MPR as deduced from the forward curve and the MPR expected in the EES at one and two years out. respectively.

Source: Central Bank of Chile.

#### Figure II.4



(\*) Average responses by quarter.

Source: Central Bank of Chile. Bank Lending Survey.

#### Figure II.5

Personal and business loans

(annualized change in the moving quarter. seasonally adjusted series. percent)



Sources: Central Bank of Chile and Superintendence of Banks and Financial Institutions (SBIF).

# **Financial conditions**

In the past few months. financial conditions have become less restrictive for households and firms. The Bank Lending Survey of the third quarter shows that more banks consider that credit conditions are more flexible than they were a quarter ago. while at the same time demand for bank credit has increased (figure II.4). This improvement in the credit supply can be attributed to more favorable client risk. improvements in the economic environment and its outlook. and better funding conditions. The strong credit demand in all segments could reflect more attractive rates. a better income and/or employment outlook among clients. and substitution of financing from other banks.

The less restrictive lending conditions are reflected in a slight month-onmonth growth in the level of total loans starting in August. especially for personal loans (figure II.5). Annual variation figures. however. continue to be negative.

The MPR cuts have clearly been passed through to bank interest rates. Current rate levels are comparable to the lows of 2004 (table II.1) Loandeposit spreads are still high. however. considering the MPR level and the risk conditions in some segments. especially consumer loans. This reflects the lending institutions' perception of credit risk.

In November. the increase in corporate bond issuance was similar to the beginning of the year. Total issues of these instruments in 2009 reached record levels. far above the previous peak of 2001. Nevertheless. the volume of issuance was lower in the second half than in the first. This could reflect more flexible bank lending conditions. increased demand for foreign financial instruments by the institutional investors. and the reopening of external financial markets combined with shrinking external corporate spreads.

In the local stock market, the IPSA rose 5% compared with the statistical closing date of the September *Report*. The increase was on the order of 16% when measured in dollars, taking into account the appreciation of the peso against the dollar. In the same period, Latin American stock exchanges as a group grew 24%, while the aggregate of world exchanges expanded 7%, measured in dollars.

M1 has recorded a high annualized growth rate for several months: 20% at November. This significant expansion is consistent with the strong monetary stimulus. M2 and M3 grew 0.6 and 4.0%. respectively. in annual terms. These trends reflect the high basis for comparison in the same period in 2008. Most notably. due to substantial time deposits made by the Ministry of Finance in the fourth quarter of last year. when measures were implemented to ensure the peso and dollar liquidity supply for the Chilean financial system.

#### Financial Markets

### Table II.1

Interest rate movements since July 2008 (percent)

	Jul. 2008 (a)	Ave. Oct-Dec 2008 (b)	Aug. 2009 (c)	Current (d) (1)	Dif. (c)-(a) (basis points)	Dif. (c)-(b) (basis points)	Dif. (c)-(d) (basis points)
MPR	7.25	8.25	0.50	0.50	-675	-775	0
Lending rates (2)							
Consumer	31.2	36.2	24.6	27.3	-398	-897	268
Commercial	11.4	15.1	6.0	5.2	-618	-981	-74
Deposit rates							
30-89 days	6.8	8.4	0.5	0.6	-624	-784	12
90 days to 1 year	7.6	9.2	0.7	1.4	-612	-776	72
1 to 3 years	8.6	9.2	1.4	2.9	-576	-632	144
Lending rates (3)							
Consumer from							
181 days to one year	37.7	40.4	35.3	34.9	-288	-552	-42
Consumer more							
than 3 years	30.0	35.9	21.5	25.5	-452	-1,044	393
Commercial							
Less than 30 days	9.7	13.5	4.9	3.1	-658	-1,043	-178
Commercial from							
181 days to one year	13.0	14.5	7.8	7.4	-556	-709	-42
Housing	4.9	5.6	4.6	4.3	-59	-132	-28

(1) November 2009.

(2) Weighted average.

 $\ensuremath{(3)}$  Consumer and commercial interest rates are in pesos. Housing loans are inflation indexed in UF.

Source: Central Bank of Chile





Real exchange rate (RER)



# Exchange rate

The nominal exchange rate depreciated between late July and early October. reaching a peso-dollar parity of almost \$560. It then began to appreciate strongly. especially in the first fifteen days of November. In the two weeks before the statistical closing of this *Report*. the exchange rate averaged somewhat under \$500 to the dollar. which is equivalent to a 10% appreciation over the level in the same period for the last *Report*.

The evolution of the peso-dollar parity largely reflects a global depreciation of the U.S. currency. Indices like the MER. the MER-5. and the MER-X recorded similar or slightly smaller changes in the same period. Even comparing the lows recorded by the peso and other currencies with respect to the dollar between late 2008 and early 2009. the current appreciation is very similar across them (figure II.6).

The Chilean peso. if anything. appears to have depreciated earlier than other currencies and appreciated later. Many factors could explain this trend. particularly financial. The portfolio changes of the pension fund administrators and the purchases of forward dollars by nonresident agents could coincide with the short-term exchange rate fluctuations (box II.1).

Nevertheless. and considering the nominal exchange rate and parities prevailing at the statistical closing of this *Report*. the real exchange rate (RER) stands at 91 (using 1986=100). This RER is nearly 6% lower than the one observed at the statistical closing of last September. This strong appreciation in real terms has a substantial effect on the projected path of inflation over the coming months (figure II.7). As a methodological assumption. the RER is expected to remain around its current level in the long run.

# Box II.1: Recent trends in the peso-dollar parity

The peso-dollar parity has fluctuated significantly in the last two years. In 2008. the difference between the maximum and minimum value was 57%. After peaking in the last quarter of 2008 the peso appreciated and its parity against the dollar fluctuated around \$550 toward the end of the first half of 2009. The peso appreciated strongly in the last two months. bringing it to around \$500 to the dollar. These movements in the peso have been reflected in a drop in the real exchange rate (RER). This box explores the factors that could explain these recent trends in the peso-dollar parity.

The parity movements along an extended period do not differ substantially from those of other emerging countries' currencies. There have. however. been differences in the timing of the changes in the valuation of the peso. First. at the beginning of the hardest period in world financial markets. the peso depreciated faster than other currencies. Its peak of depreciation occurred between late October and early December 2008. while for several other economies saw this peak closer to the turn of 2009. Second. its recent period of appreciation began strongly in mid-October. while other currencies had begun in July. Nevertheless. at the statistical closing of this *Monetary Policy Report*. the magnitude of the peso's appreciation with respect to its peak is fairly similar to that of other emerging currencies (table I.2).

What idiosyncratic factors could explain these differences in the behavior of the peso? One possibility is that the peso's decoupling from the bulk of the emerging currencies coincided with the adoption of complementary monetary policy measures. in particular the term liquidity facility (FLAP. see Glossary). Forward dollar purchases by external agents increased sharply beginning in mid-July (figure II.8). This increase in non-deliverable forwards (NDF) can be attributed to an increase in positions in Brazil or other markets<sup>1</sup>/. possibly motivated by the low interest rates in Chile. The later reversal of these positions coincided with the recent appreciation of the peso. Another related factor is the increase in the institutional investors' exposure to the dollar as the external markets have normalized. which became increasingly evident starting in early August (figure II.9). The available data also indicates that this exposure was reduced once the peso started its period of strongest appreciation<sup>2</sup>/.

However. the nominal and real appreciation of the peso has a substantial effect on the projected path of inflation over the coming months. The Board reiterates that it closely monitors the implications of the RER level on inflation and compliance with its monetary policy objective.





# Figure II.9

Nominal exchange rate and net foreign currency purchases by the  $\ensuremath{\mathsf{AFPs}}$ 



(\*) Calculated on the basis of the difference between net foreign currency remittances and the national derivatives portfolio reported by the Superintendence of Pensions (SP). Source: Central Bank of Chile.

<sup>2</sup>/This interpretation is consistent with evidence presented by Selaive (2005) and Cowan et al. (2007).

<sup>&</sup>lt;sup>1</sup>/ This corresponds to carry trade operations. in which investors take on debt in economies with low interest rates in order to invest those resources in economies with a higher return. creating pressures for a currency depreciation in the first economy and for an appreciation in the second.

# III. Demand and output

#### Figure III.1

Monthly indicator of economic activity (Imacec) (index 2003=100)



### Figure III.2

Contribution to annual GDP growth (real annual change, percentage points)



Source: Central Bank of Chile.

This chapter reviews the recent evolution of demand and output and their short-term prospects, in order to examine possible inflationary pressures.

# Aggregate demand

As forecast in the September *Report*, economic activity began to pick up in the second half of the year. Quarter-on-quarter GDP growth was 1.1% in the third quarter<sup>1</sup>/. In October, the monthly indicator of economic activity (Imacec) grew month on month, although the annual rate remained negative (figure III.1). Several partial indicators suggest that the recovery will continue in the coming months. When combined with the low basis for comparison in 2008, this supports a forecast of positive annual output growth rates in the baseline scenario. However, the GDP recovery in the third quarter was slower than projected, so the output gap did not begin to close as expected. The baseline scenario assumes that there will be a progressive—though incomplete—closing of the output gap in the forecast horizon. Despite this short-term scenario, there are risks in the medium term. The global recovery could be more subdued than expected, but in the short term a more vigorous restocking of inventories could give way to faster output growth than forecast for the first half of 2010.

Domestic demand fell 9.1% annually in the third quarter. The quarter-onquarter growth rate for the third quarter was negative but close to zero. The evolution of domestic demand continues to be determined by the significant depletion of inventories and the drop in gross fixed capital formation(GFCF), particularly in machinery and equipment. Private consumption, in contrast, began to recover (figure III.2). As an expression of the fall in domestic demand, the improvement in external demand, and the increase in copper price, the current account of the balance of payments recorded a surplus of US\$574 million in the third quarter. This is equivalent to 0.5% of GDP in the moving year ending in that quarter.

The global economic cycle continued to be reflected in volume exports, which fell an average annual 5% in the first three quarters of 2009. The value of exports dropped almost 30% in the same period, largely driven by mining shipments. Most recently, however, this outlook has been changing, as metal

<sup>&</sup>lt;sup>1</sup>/ In accordance with the policy disclosure of the Quarterly National Accounts, the first GDP estimate for the third quarter of 2009 and new GDP estimates for the first and second quarters of 2009 were published on 18 November.

Figure III.3



(1) A value over (under) 50 points indicates that the inventory level is too high (low).(2) Seasonally adjusted quarterly series.

Sources: Central Bank of Chile and Icare/Universidad Adolfo Ibáñez.

#### Figure III.4



Sources: Central Bank of Chile and National Statistics Institute.

### Figure III.5

Gross fixed capital formation (GFCF) (1) (quarterly change, percent)



Seasonally adjusted series.
Includes United States, Japan, United Kingdom, and the Euro area.
Includes Australia, Canada, Norway, and New Zealand.

Sources: Central Bank of Chile, based on CEIC Data and International Monetary Fund.

prices have improved and production has recovered in the copper sector. Natural resources GDP stopped falling in annual terms in the third quarter, mainly as a result of mining, which grew 1.3% in annualized terms after seven consecutive quarters of twelve-month contractions. Fishing continued to be affected by the performance of salmon farming, where the ongoing fish health problems will probably continue to have an impact in the immediate future. This has had a substantial effect on GDP. Finally, electricity, gas, and water (EGW) has recorded positive annual rates for five quarters, thanks to improved efficiency in electricity generation.

The baseline scenario of this *Report* projects that the Chilean economy will grow between 4.5 and 5.5% in 2010, after falling 1.9% in 2009. In this scenario, the current account of the balance of payments will post a surplus of 0.6% of GDP in 2010, which is lower than forecast in September. The output recovery is founded on an external scenario that will stimulate the Chilean economy, combined with a recovery of domestic demand after a contraction this year. The latter is largely supported by a monetary policy that, beyond the gradual increase forecast for the MPR, will continue to be expansionary over much of the relevant policy horizon.

# Domestic demand

Domestic demand has been determined by the strong adjustment in inventories and the low levels of gross fixed capital formation, which has generally been the trend in most of the world's economies. In the moving year ending in the third quarter, inventory depletion equaled 4.0 percentage points of GDP at 2003 prices. Several factors could explain the behavior of inventories, including the sharp contraction in demand at the firm level, tighter financial conditions at the start of this cycle, and possibly a prior overaccumulation based on an overly optimistic outlook for demand given the international crisis<sup>2</sup>/. Currently, no further contractions are expected similar to those seen in the past year. Partial indicators suggest that there is no longer a perception of excess inventories, as evidenced in the Monthly Business Confidence Index (Imce) and in the gap between the recovery of sales and manufacturing production (figures III.3 and III.4). While the halt in the contraction of inventories alone will have a positive effect on GDP, when and how much this component will contribute to output growth is still uncertain. It will depend on the target level of inventories that firms want to hold during the cyclical recovery process. In any case, this level will most probably be lower than was estimated before the global crisis.

The most recent inventory depletion coincided with a recovery in manufacturing, which is visible in all branches of manufacturing, especially those tied to investment. Although manufacturing exports have recovered over the course of the year, some shipments are still weak, most notably salmon as well as forestry products tied to construction and furniture.

In Chile, the magnitude of the adjustment to gross fixed capital formation is on the level of some Asian economies, with quarterly drops of about 10% between late 2008 and early 2009 (figure III.5). Capital goods imports have

<sup>&</sup>lt;sup>2</sup>/ For explanations of the inventory depletion, see *Monetary Policy Report*, September 2009, box III.1.

## Figure III.6

Capital goods imports



(US\$ million per quarter, seasonally adjusted series)

Source: Central Bank of Chile

Figure III.7

Construction activity indicators (\*) (indices 2003=100, seasonally adusted series)



Sources: Central Bank of Chile and Chilean Chamber of Builders.

### Figure III.8

Retail sales and new car sales



Sources: National Automobile Association of Car Dealers, Central Bank of Chile and National Chamber of Commerce. not yet recovered (figure III.6). The rate of investment to GDP fell in real terms from the peaks recorded at the end of last year, from almost 30% to 27% in the moving year ending in the third quarter.

Although gross fixed capital formation continued to drop significantly in annual terms in Chile in the third quarter, its seasonally adjusted levels stopped falling, and the outlook is favorable. The survey carried out by the Capital Goods and Technological Development Corporation (CBC) reveals a new increase in investment projects in the 2009–2012 period, which is consistent with the increase in cement sales and construction materials and with the Monthly Construction Activity Index (Imacon) (figure III.7). Numerous projects for this year were rescheduled due to delays in the timetable, and previous figures on construction activity have been revised downward.

Housing sales are higher than at the beginning of the crisis. Financial conditions have also become less restrictive, with lower mortgage rates, a reduction in requirements, and higher demand for personal loans. The latter two factors are captured in the Bank Lending Survey for the third quarter. Some of the stimulus for housing construction this year stems from fiscal support programs. Housing construction trends should therefore be interpreted with caution through 2010, as activity could drop off when the subsidized housing construction programs revert to past levels.

Consumption was one of the components of demand that were least hard hit in this cycle. The level of private consumption increased in the third quarter, and the available indicators, and the evolution of its fundamentals, suggest that the expansionary trend will hold. Retail sales were particularly noteworthy, with both durable and nondurable goods sales exceeding the peaks of 2008. car sales recovered substantially: while they did not reach the peaks of 2008, they did record levels similar to early 2007 (figure III.8). Seasonally adjusted consumer goods imports also recovered in recent months. Thus, although retail sales (tied to consumption) are growing strongly, wholesale trade (largely tied to investment) has been less dynamic.

The determinants of consumption point to continued growth in 2010. Consumer expectations have improved in the last few months, and it is noteworthy that the outlook one year out has reached levels not seen since the first half of 2006. Notably, consumers consider that now is a good time to purchase household goods. *The Universidad de Chile*'s indicator has similarly recovered from the drops recorded in 2008 (figure III.9). Financial conditions have become less restrictive, which has led to a drop in the household financial burden (partly as a result of lower interest rates) and an increase in consumer loans in the most recent period.

Labor market trends also support the outlook for consumption. Data for the last few moving quarters indicate that the deterioration of this market has ceased. Seasonally adjusted employment has grown since the moving quarter ending in June. The unemployment rate increased significantly with the crisis, but it has already started to drop (figure III.10). Most recently, the quality of employment has improved, with the waged job creation rate exceeding the total job creation rate. Total employment has not yet recovered the jobs lost between late 2008 and early2009, but some sectors and categories have done



86 88 90 92 94 96 98 00 02 04 06 08 (1) A value over (under) 50 points indicates optimism (pessimism). Before January 2003, the index was quarterly; after that date, it is published monthly. (2) Index March 2001 = 100.

Sources: Adimark and University of Chile.

#### Figure III.10



Sources: Central Bank of Chile and National Statistics Bureau.

## Figure III.11



<sup>(\*)</sup> See glossary for definition.

Sources: Central Bank of Chile and National Statistics Bureau.

so. In seasonally adjusted terms, the contraction of employment in this cycle occurred over five consecutive months (between November 2008 and March 2009), whereas the contraction in the late 1990s lasted for nine months. Moreover, the total job loss in this episode reached 123,000 jobs, versus 184,000 between 1998 and 1999, thanks to the dynamics of self-employment. To date, 62,000 of the 123,000 lost jobs have been recovered, albeit with a different composition. The employment outlook, as captured in the Imce, is optimistic in all sectors.

Another factor that might have explained why consumption was less affected in this cycle is the evolution of income. The wage mass increased strongly over the past few months as a result of the increase in real wages. The terms of trade (ToT) also improved, based on the drop in oil and food prices relative to the average for 2008 (figure III.11). Estimates show that the terms of trade, excluding the copper price, will increase 6% in annual terms in 2009.

# **IV. Prices and costs**

#### Figure IV.1

CPI, CPIX, and CPIX1 inflation (\*) (annual change, percent)

(\*) See glossary for definitions.

Source: National Statistics Bureau



This chapter examines recent trends in the main components of inflation and costs, identifying different sources of inflationary pressures and their probable future behavior.

# **Recent trends in inflation**

In the past few months, core and headline inflation have been somewhat lower than forecast in the September *Report*. Annual inflation rates have continued to fall, and in November almost all inflation measures were in negative territory (table IV.1 and figure IV.1). The inflationary pressures facing the Chilean economy are low. In the most likely scenario, annual CPI inflation is expected to become positive over the course of the first half of 2010. This forecast is subject to a high degree of uncertainty due to both the evolution of the determinants of CPI inflation and methodological changes to be implemented by the National Statistics Bureau, INE, at the start of the year.

### Table IV.1

Inflation indicators (\*)

(annual change, percent)

		CPI	CPIX	CPIX1	CPIX1	CPI excluding	CPIT	CPINT	CPIG	CPIS
					excluding	foods and				
					foods	energy				
2008	lan.	7.5	6.3	6.3	3.3	2.9	8.2	6.8	9.2	5.8
	Feb.	8.1	7.2	6.6	3.4	3.3	7.6	8.4	9.1	7.1
	Mar.	8.5	7.8	7.4	3.9	4.0	7.2	9.6	9.4	7.7
	Apr.	8.3	8.2	7.7	3.6	3.8	5.6	10.7	8.4	8.3
	May	8.9	8.5	8.3	4.3	4.4	6.6	11.0	9.4	8.4
	Jun.	9.5	8.8	8.3	4.5	4.7	7.6	11.1	10.2	8.8
	Jul.	9.5	9.2	8.4	5.0	5.3	8.2	10.7	9.8	9.2
	Aug.	9.3	9.1	8.2	5.2	5.5	9.1	9.6	9.4	9.3
	Sept.	9.2	8.9	7.8	5.1	5.6	9.6	9.1	9.3	9.3
	Oct.	9.9	9.4	8.3	5.9	6.4	10.1	9.8	10.1	9.7
	Nov.	8.9	9.5	8.5	6.2	6.9	7.2	10.6	8.1	9.9
	Dec.	7.1	8.6	7.8	5.3	6.4	3.8	10.4	5.7	9.5
2009	Jan.	6.3	8.0	6.9	4.4	5.8	1.8	11.0	4.2	9.6
	Feb.	5.5	6.7	6.7	4.7	5.2	2.5	8.6	4.6	7.4
	Mar.	5.0	6.5	6.2	4.7	5.2	2.2	8.0	3.8	7.3
	Apr.	4.5	5.5	5.3	4.4	4.8	1.7	7.6	2.8	7.2
	May	3.0	4.4	3.7	3.0	3.5	-0.6	7.0	0.5	6.7
	Jun.	1.9	3.6	3.0	2.4	2.8	-2.3	6.4	-1.2	6.1
	Jul.	0.3	1.7	1.5	0.9	1.4	-4.0	4.9	-2.8	4.6
	Aug.	-1.0	0.4	1.0	0.5	0.8	-5.1	3.1	-3.7	2.7
	Sept.	-1.1	0.2	0.8	0.3	0.3	-5.3	3.2	-3.9	2.8
	Oct.	-1.9	-0.4	0.2	-0.4	-0.4	-6.0	2.2	-5.0	2.2
	Nov.	-2.3	-1.6	-0.7	-1.2	-1.6	-4.7	0.3	-4.4	0.8

(\*) See glossary for definitions.

Sources: Central Bank of Chile and National Statistics Bureau.





(\*) See glossary for definitions.

Sources: Central Bank of Chile and National Statistics Bureau.

Figure IV.4

Inflation expectations (percent)



( ) EES. ECONOMIC Expectations survey.

Sources: Central Bank of Chile and Icare/Universidad Adolfo Ibáñez.

### Figure IV.5



Sources: Central Bank of Chile and National Statistics Bureau.

Annual CPI inflation continues to be negative, changing from -1.0% in August to -2.3% in November. Even though month-on-month inflation rates were also low and in some cases negative, with the exception of September, the drop in annual inflation is partly related to the high basis for comparison in the same months of 2008 (figure IV.2). In fact, the velocity of inflation began to return to zero and was even positive for some indicators (figure IV.3).

The monthly fluctuations of the CPI were determined by fuel prices in pesos, perishable foods, and some isolated factors such as the adjustment and back billing of electricity rates. In addition, the methodological changes that the INE introduced to the CPI measure in early 2009 have continued to affect monthly inflation rates. In September, for example, some prices in the CPI basket posted an extraordinary increase, due to the quality adjustments that are now carried out on CPI prices. Fluctuations in clothing prices also have a stronger impact, since their seasonal changes are no longer smoothed.

Starting in January, the INE will calculate the CPI using a basket of prices measured at the national level, rather than just for the Santiago Metropolitan Region as has been the practice until now. Although there probably exist differences in price levels across cities, due to factors such as real estate prices, transportation costs or and the degree of tradability of goods, it is not evident that the price level variations are very different. In any case, the effect or sign of these changes in the inflation measurement cannot be predicted.

# Inflation expectations

Market inflation expectations are in line with the 3% annual Central Bank's target in the medium term, despite the prospects of low inflation in the coming months. Shorter-term expectations point to an inflation trend similar to the baseline scenario considered in this *Report*. The Economic Expectations Survey (EES) carried out by the Central Bank in December indicates that expected inflation for the end of 2010 is the same as in September, 2.5% in annual terms. Two years ahead, inflation is expected to be 3%, the same figure since late 2008. Inflation expectations one year ahead , as captured in the Monthly Business Confidence Indicator (Imce), rose from 2.0% in August to 2.5% in November (figure IV.4). The Economic Perception Index (Ipec) indicates that the percentage of people who think that inflation will rise "a lot" in the next twelve months fell from 39% in August to 34% in November. Breakeven inflation at different terms, as deduced from financial asset prices, continued to be highly volatile, with a mixed performance.

# **Cost pressures**

Imported inflationary pressures have remained limited. On one hand, commodity prices increased in the world markets, especially for oil, while imported consumer goods prices remained low. On the other hand, the peso appreciated substantially in real and nominal terms over the past several weeks, which offset the price increases. In fact, since the close of the September *Report*, the exchange rate has appreciated 10%. Considering the two weeks prior to the statistical closing date of this *Report* and of the September *Report*, the real exchange rate (RER) fell nearly 6%. This strong real appreciation has a substantial effect on the projected path of inflation over the coming months.

#### Figure IV.6

Food prices

(monthly change, percent; index 1997=100) CPIX1 foods GSCI grains and cereals (\*) 2.5 700 600 2.0 500 1.5 1.0 400 0.5 300 0.0 200 -0.5 100 06 07 Jul 08

Sources: Bloomberg and National Statistics Bureau.

# Figure IV.7



Source: Central Bank of Chile.

### Figure IV.8



Sources: Chilean Association for Occupational Safety and Health (AChS), Central Bank of Chile, and National Statistics Bureau. The baseline scenario assumes that the RER will not differ materially from its current value over the next two years.

The WTI oil price fluctuated around US\$75 per barrel in the last two weeks, with prices at the margin closer to US\$70 per barrel. Considering the average of the last ten business days, the WTI oil price is 6% higher than at the statistical closing of the last *Report*. The benchmark price of gasoline in the international market increased to a similar extent. When converted to pesos, however, fuel prices fell around 7% in the same period. Thus, the contribution of fuels to annual inflation remains negative (figure IV.5). The baseline scenario assumes that fuel prices in pesos will increase in the near future, based on the forecast for an international price increase and the expected hike in the gasoline tax in the first quarter of 2010.

With regard to food prices, the increase in some prices in international markets, most notably nonperishable goods, has not been paralleled in local inflation to date. Changes in domestic food prices were mainly determined by changes in the prices of perishables, in particular seasonal changes in some fresh fruit and vegetable prices (figure IV.6). Nevertheless, recent experience shows how fast such price changes in the external market can pass through to the local market, so it is important to continue monitoring these prices carefully. The baseline scenario assumes that food prices will increase more than was previously forecast, given the higher external prices, but the increase will not be large.

In the third quarter, the price level of Chilean imports in dollars, measured through the unit value import indices (IVUM) stopped falling for both total and consumer goods (figure IV.7). Inflation in dollars relevant for the Chilean economy, measured through the external price index (EPI), began to recover some of its earlier drop, changing from -11.2 to -8.8% in annual terms between the second and third quarter of the year. Nevertheless, annual inflation continues to be negative in many economies.

The producer price index (PPI), which only considers domestic goods and services prices, has stabilized with positive monthly changes, mainly due to mining and, to a lesser extent, agriculture. Annual rates have been around 11% in recent months. The wholesale price index (WPI), which includes imported and domestic goods prices, fell from -5.8% annually in August to -11.8% in October, mainly because of manufacturing. The three-month outlook for costs, as captured in the Imce business survey eased up in November, after increasing for six consecutive months, coincident with the exchange rate appreciation.

# Wages

Cost pressures from the labor market show no significant changes to those observed several months ago. The annual growth rate of nominal wages continued to fall, but faster than in the last quarter, responding to the drop in inflation originating in their usual indexation (figure IV.8). Real wages have increased thanks to the reduction in CPI inflation. However, when deflated using GDP excluding the natural resource sectors they post a decline (figure

<sup>(\*)</sup> Index calculated by Goldman Sachs

#### Figure IV.9



IV.9). The baseline scenario projects that the annual growth rate of nominal wages will continue to fall, in line with the recent inflation trend, inflation expectations, and the cyclical conditions facing the labor market.

Unit labor costs (ULC) recorded annual rates of change of between 6% and 9% in September of this year. Relative to the second quarter, the growth rate continued to fall for ULC, ULCX, and self-employment. However, discounting mining, EGW, and fishing, and excluding agriculture, the annual rate of change was similar, in accordance with the effects of employment and output trends on measured productivity (figure IV.10).

(1) Wages deflated by other GDP at factor costs. See glossary for definitions.

(2) Wages deflated by the CPI. See glossary for definitions.

Sources: Central Bank of Chile and National Statistics Bureau.

# Figure IV.10

Unit labor cost (ULC)

(annual change, percent)



(1) Includes total nominal labor costs, real waged hours worked, wage employment, and total GDP.

(2) Same as Total, but replaces wage employment with national employment.

(3) Includes other labor costs, other wage employment, other GDP (excluding EGW, mining, and fishing), and real waged hours worked.

(4) Same as Other, but excluding the agricultural sector from other wage employment and from other GDP.

(5) See glossary for definitions.

Sources: Central Bank of Chile and National Statistics Bureau.

# V. Inflation scenarios

#### Table V.1

International baseline scenario assumptions

	2008	2009 (f)	2010 (f)	2011 (f)
		(annual char	nge, percent	)
Terms of trade (ToT)	-15.0	0.3	4.7	-2.3
Trading partners' GDP (*)	2.9	-0.8	3.6	3.8
World GDP at PPP (*)	3.0	-0.8	3.8	4.2
World GDP at market exchange rate (*)	1.8	-1.8	3.1	3.4
External prices (in US\$)	12.2	-6.0	9.6	1.0
		(lev	els)	
LME copper price (US¢/lb)	316	230	270	270
WTI oil price (US\$/barrel)	100	62	80	86
Parity price of gasoline (US\$/m <sup>3</sup> ) (*)	739	472	607	641
US\$ Libor (nominal, 90 days)	2.9	0.7	0.9	3.2

(\*) See glossary for definition. (f) Forecast.

Source: Central Bank of Chile.

### Table V.2

Economic growth and current account

	2007	2008	2009 (f)	2010 (f)	
		(annual char	al change, percent)		
GDP	4.7	3.2	-1.9	4.5 - 5.5	
National income	7.1	3.8	-2.3	7.5	
Domestic demand	7.8	7.4	-7.4	8.9	
Domestic demand					
(w/o change in inventories)	8.2	7.9	-3.3	4.6	
Gross fixed capital formation	12.0	19.5	-16.1	8.2	
Total consumption	7.1	4.2	1.5	3.5	
Goods and services exports	7.6	3.1	-4.1	5.4	
Goods and services imports	14.9	12.9	-15.7	14.3	
Current account (% of GDP)	4.4	I -2.0	I 2.1	0.6	
		(US\$ r	nillion)		
Current account	7,189	-3,440	3,300	1,200	
Trade balance	23,635	8,846	13,100	13,000	
Exports	67,666	66,455	52,600	60,900	
Imports	-44,031	-57,610	-39,500	-47,900	
Services	-975	-646	-1,100	-1,000	
Rent	-18,595	-14,563	-11,300	-13,700	
Current transfers	3,123	2,924	2,600	2,900	

(f) Forecast.

Source: Central Bank of Chile.

This chapter presents the Board's assessment of the prospects for the Chilean economy over the next two years, including the analysis and decision of the Monetary Policy Meeting held on 15 December 2009. Projections of the most likely inflation and growth trajectories are provided. Which are conditional on the assumptions that make up the baseline scenario, so the Board's assessment of the balance of risks for output and inflation is also provided.

# **Baseline projection scenario**

# **External scenario**

In the third quarter, the world economy began a recovery phase; fourthquarter indicators suggest that this has continued. Manufacturing production is picking up in several economies, as are the sales of durable goods. According to consensus, in 2009 economic activity will fall less than was foreseen a few months back (table V.1). For 2010, projections are revised up in every region. Divergences persist with respect to growth in the United States, with a marked bimodality. For 2011, average world growth projections are unchanged from September, although a slower pace is expected for the U.S. Thus, after dropping 0.8% this year, the world economy will grow a projected 3.8% in 2010 and 4.2% in 2011. These rates are smaller than they were in the years leading to the crisis, partly reflecting the financial constraints in the developed world and the reduced trend growth believed to have occurred in several economies.

Commodity prices have shown an increase in the past several months. A part of it has to do with improved growth prospects around the world, especially in emerging Asia and, another part, with the depreciation of the dollar (figure V.1). In the baseline scenario, commodity prices are up from September. The copper price will average US\$2.70 per pound LME in 2010-2011. Oil, meanwhile, considering the futures in the two weeks prior to the statistical closing, will average US\$80 and US\$86 per WTI barrel in the same period. The terms of trade will increase 4.7% in 2010 and will fall 2.3% in 2011. The external price index relevant for Chile (EPI), measured in dollars, will rise 9.6% and 1.0% in 2010 and 2011, respectively. In the two-year period 2010-2011, imported inflation, measured in pesos, is projected to be similar to what was foreseen in September.

#### Figure V.1



 The gray area, as from the fourth quarter of 2009, depicts the breakdown of projected inflation in the baseline scenario.
In parentheses, shares in the CPI basket of December 2008. Before that.

built with weights in the basket of December 1998.

Sources: Central Bank of Chile and National Statistics Bureau.

#### Table V.3

Inflation

(annual change, percent)

	2008	2009 (f)	2010 (f)	2011 (f)
Average CPI inflation	1 87	16	I 10	27
December CPI inflation	7.1	-1.4	2.5	2
CPI inflation in around 2 years (*)				3.0
Average CPIX inflation	8.4	2.8	0.3	2.5
December CPIX inflation	8.6	-1.5	1.9	
CPIX inflation in around 2 years (*)				3.0
Average CPIX1 inflation	7.8	2.8	0.8	2.6
December CPIX1 inflation	7.7	-0.6	2.1	
CPIX1 inflation in around 2 years (*)				3.0

(f) Forecast.

(\*) Inflation projected to the fourth quarter of 2011.

Source: Central Bank of Chile.

#### Figure V.2

Quarterly GDP growth scenario (\*) (annual change, percent)



(\*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the basline scenario are included. These intervals summarize the risks on inflation as assessed by the Board. The projection scenario incorporates as a methodological assumption that the MPR will be kept at its minimum level 0.50% at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

# Aggregate demand, output and external accounts

The baseline scenario assumes that, in 2009, domestic output and demand will fall 1.9 and 7.4%, respectively (table V.2). On the demand side, inventory depletion and the drop in gross fixed capital formation are behind this result. However, the third quarter already began showing some growth. Although in October the y-o-y variation of the Imacec remained in negative territory, in four of the last five months it posted an increase in month-to-month activity. Furthermore, as suggested by the baseline scenario of this *Report* and private expectations, in the fourth quarter of 2009 the GDP will post a positive annual variation rate. Continuing with the recovery process, for 2010 the Board projects GDP to grow between 4.5 and 5.5%, and domestic demand to increase 8.9%. The biggest contribution to this result will come from the end of inventory depletion and a rebound of gross fixed capital formation. The ratio of investment to GDP, in 2003 prices, will post a slight increase with respect to 2009. These projections use the fiscal policy scenario contained in the Budget Law.

The Board estimates that, in the period 2010-2011, trend growth will remain within the range of 4.0% to 4.5%. Into the longer term, it foresees potential growth approaching 5%. As has been pointed out, the possible increase in trend growth will depend, among many factors, on a reduction in energy costs, a recovery of the capital cost and an increase in productivity (box V.1). In any case, growth foreseen in the baseline scenario will yield the way to a progressive, yet incomplete, closing of the present output gap.

The current account of the balance of payments will end 2009 with a surplus of 2.1% of GDP. This figure is a little higher than the September forecast, because of the effect of the higher copper price on value exports and the trade balance. In 2010, the current account will continue to post a surplus, although its size will be less than had been anticipated in September: 0.6% of GDP. The higher price projected for imported commodities, such as oil, are behind this change. Measured at trend prices, the current account deficit for 2009-2010 is thought to be between 2.5 and 3.0% of GDP.<sup>1</sup>/

# Inflation

The Board estimates that y-o-y CPI inflation will close 2009 at -1.4% and will go back to positive figures over the course of the first half of 2010 (figure V.1). Convergence to 3% will occur during 2011. Core indicators will show negative y-o-y variation rates for some months longer than CPI, and will also hit 3% over the course of 2011(table V.3). Market inflation expectations consider similar prospects and remain around 3% in the medium term. In January, the national statistics bureau, INE, will begin to base the calculation of the CPI on a nationwide survey, not only on the Santiago Metropolitan Region as it has so far. Although there probably exist differences in price levels across cities, due to factors such as real estate prices, transport costs or the degree of tradability of goods, it is not evident that the price level variations are very different. Nevertheless, the effect or the sign of these changes in how inflation will be measured cannot be anticipated.

<sup>&</sup>lt;sup>1</sup>/ Considers corrections in prices, not in volumes. Long-term prices for copper and oil are US\$2 per pound and US\$75 per barrel, respectively. Both prices are exactly the same assumed in September's *Monetary Policy Report*.

### Figure V.3



(\*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the basline scenario are included. These intervals summarize the risks on inflation as assessed by the Board. The projection scenario incorporates as a methodological assumption that the MPR will be kept at its minimum level at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

Source: Central Bank of Chile.

#### Figure V.4



(\*) The figure shows the confidence interval of the baseline projection over the respective horizon (colored area). Confidence intervals of 10%, 30%, 50%, 70% and 90% around the basline scenario are included. These projection scenario incorporates as a methodological assumption that the MPR will be kept at its minimum level at least until the second quarter of 2010. Additionally, it estimates that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December, and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this *Report*.

Source: Central Bank of Chile.

Various factors determine inflation's convergence to the target. The external scenario will continue to add a boost to economic activity, with confidence recovery and global financial conditions gradually normalizing and permitting domestic and international demand to pick up. Domestically, monetary policy will remain expansionary, which, together with the less tightened financial conditions, also backs this projection. Aside from the assumptions already mentioned regarding output gaps, external inflation and commodity prices, the Board also believes that the real exchange rate (RER) stands at a level that is consistent with its long-term fundamentals. Accordingly, it uses the methodological assumption that, over the long run, the RER will not differ materially from the average of the two weeks prior to this Report's statistical closing. It also assumes that nominal wages will be adjusted taking into account the economy's stage of the cycle and inflation dynamics, and that pricing decisions are based on inflation expectations that are in line with the target. Finally, these projections incorporate as a working assumption that the MPR will be held at its minimum level, 0.5%, at least through the second quarter of 2010 and that the pace of its normalization will be comparable to the one of the Economic Expectations Survey of December and more gradual than is implicit in the prices of financial assets prevailing over the two weeks prior to the statistical closing of this Report.

# **Risk scenarios**

The baseline scenario reflects the events believed to be the most likely to occur with the information at hand when making these projections. Different situations will imply a macroeconomic scenario—and a monetary policy trajectory—also different. After consideration of the aforesaid elements, the Board estimates that the balance of risks for inflation and growth are unbiased (figures V.2, V.3 and V.4).

One risk derives from doubts about how robust the global economic recovery will ultimately be. Mainly, due to the growth capacity of consumption and investment within a context of still unresolved fragility of developed financial markets, a complex labor market in various economies and an ongoing deleveraging process. How and when monetary and fiscal stimulus packages will be withdrawn and their effects on the operation of financial markets are also causes for concern. Another risk comes from challenges facing macroeconomic governance, considering the possibility of persistent and significant increases in capital inflows to emerging economies. Uncertainty surrounding persistent global imbalances is still present. Domestically, it is possible that in the short run economic activity will rebound at a faster pace than foreseen due to a swifter accumulation of inventories. Another risk is the recent trend of exchange rates and its effects on RER. Although it is estimated that the RER is within the range considered to be consistent with its long-term fundamentals, the Board reiterates that it closely monitors the implications of the RER level on inflation and compliance with its monetary policy objective.

The Board will continue to evaluate the probabilities of these risks and their consequences on domestic inflationary prospects. The Board also reiterates that it will continue to use its policy instruments with flexibility in order for projected inflation to stand at 3% over the policy horizon.

# Box V.1: Energy costs and productivity

In the last decade, the Chilean economy has faced complex energy conditions. In the late 1990s, a strong drought forced the application of restrictions on industrial and residential electricity use. Starting in 2003, the supply of natural gas from Argentina was restricted, which resulted in a total cut-off of the industrial supply on several occasions. Finally, in 2007 and 2008, another drought affected hydroelectric generation, necessitating a switch to thermal energy when the oil price hit record highs.

These episodes caused a series of direct and indirect effects on output and inflation. On one hand, in response to the hydroelectric supply problems, value added in electricity generation plunged, due to the use of costlier alternative energy sources. In 2007, the output of the electricity, gas, and water (EGW) sector fell 29% in annual terms, with a contribution to aggregate GDP of -0.8 percentage points. On the other hand, the indirect effects of these events on GDP are largely associated with the manufacturing sector, which was affected, first, by the cut-off of natural gas from Argentina; second, by the cost of refitting equipment to be compatible with other energy sources; and, finally, by the strong hike in energy costs. Methanol production was also affected by the cut-off of gas from Argentina. Estimates carried out in early 2007 indicated that the higher energy costs reduced growth in the manufacturing sector in 2006 by between 1.0 and 2.6 percentage points<sup>1</sup>/. The available information suggests that this higher cost has resulted in less intensive use of energy in production (figure V.5).

With regard to inflation, the effects of the higher energy costs have been apparent. In 2007 and 2008, a significant share of the inflation increase stemmed from the rise in fuel prices and electricity rates (figure IV.5). It is also probable that the inflationary shocks to food and fuel prices were passed though strongly to other prices, as a result of the impact of the higher energy costs on the cost structure.

The higher energy costs also had an effect on total factor productivity (TFP). In May 2008, the Board estimated that given the increase in energy prices and the assumptions on its evolution in the forecast horizon, TFP would grow at a lower rate than previously assumed in the baseline forecast scenario<sup>2</sup>/. The Board therefore adjusted its estimate of the economy's trend growth, from around 5% a year to between 4.5 and 5.0% a year. In September, the Board revised this estimate again based on the effect of the contraction of investment on the capital stock, putting trend growth between 4.0 and 4.5% in annual terms.

# Figure V.5

Energy: relative price and reason for use (average index 1989–2008=100)



Recent analysis suggests that the higher energy costs could have affected the trend growth measure. Echavarría et al. (2009) incorporate energy consumption in an aggregate production function for the economy, which also considers a measure of hours worked and a measure of the capital stock. Depending on the rate of substitution between energy consumption and other factors of production, the measure of the economy's TFP could be higher than considered in a traditional approach. If the analysis further incorporates the potential effect of energy costs on the economy's real capital (by affecting its depreciation rate), the resulting estimates indicate that the higher energy costs may have implied 0.3 percentage points lower trend growth, on average, in the last three or four years.

These results are in line with past *Reports*, in that the slowdown of TFP in this decade can partly be explained by lower energy consumption associated with higher costs. Thus, to the extent that energy costs fall, trend growth can be expected to rise higher than currently estimated.

<sup>1/</sup> Monetary Policy Report, January 2007, box IV.1: pages 39 and 40.

<sup>&</sup>lt;sup>2</sup>/ Monetary Policy Report, May 2008, box VI.1: page 50.

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# Glossary

#### Commodities exporters: Australia, Canada, and New Zealand.

- CPIGX: Goods price index, which excludes fuels and fresh fruit and vegetables, leaving 45.6% of the total CPI basket (51.2% in the December 1998 basket).
- **CPISX:** Services price index, which excludes basic services and public transportation fares, leaving 36.8% of the total CPI basket (35.5% in the December 1998 basket).
- **CPIX:** Core consumer price index. CPI excluding fuels and fresh fruit and vegetables, leaving 91% of the total CPI basket (92% in the December 1998 basket).
- **CPIX1:** CPIX excluding fresh meat and fish, regulated tariffs, indexed prices, and financial services, leaving 73% of the total CPI basket (70% in the December 1998 basket).
- **EPI:** External price index, calculated using the wholesale price index (WPI)—or the CPI if the WPI is not available—expressed in dollars, of the countries relevant to Chile (that is, the countries used for the calculation of the multilateral exchange rate, MER), weighted according to their share of Chilean trade, excluding oil and copper.
- **EPI-5:** EPI using the price indices of Canada, the euro area, Japan, the United Kingdom, and the United States.
- **Expansion velocity:** For monthly data, the annualized change in the moving quarter in a seasonally adjusted series. For quarterly data, the annualized quarterly change in a seasonally adjusted series.
- **GDP at factor costs:** Total GDP total less net VAT collected and import duties.
- **GDP**, **natural resources**: Includes the following sectors: electricity, gas, and water (EGW); mining; and fishing.
- **GDP**, other: Includes the following sectors: agriculture, livestock, and forestry; manufacturing; construction; retail; transport and communications; financial and business services; home ownership; personal services; and public administration.
- Government Bond Index—Emerging Markets (GBI-EM): Index of emerging country government bonds denominated in local currency. Calculated by JP Morgan Chase.
- **Growth of trading partners:** The growth of Chile's main trading partners, weighted by their share in total exports over two moving years. The countries included are the destination for 94% of total exports.
- **IREM**: Wage index. The average wage paid per hour, weighted by the number of regular hours worked.

# Abbreviations

- BCP: Central Bank bonds in pesos
- EES: Economic Expectations Survey
- **CBC:** Capital Goods and Technological Development Corporation (*Corporación de Desarrollo Tecnológico y de Bienes de Capital*)
- CPIG: Consumer goods price index
- **CPINT:** Nontradables consumer price index
- CPIS: Consumer services price index
- CPIT: Tradables consumer price index

- **IREMX:** IREM excluding community, social, and personal services, EGW, and mining.
- Latin America: Argentina, Bolivia, Brazil, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela.
- LCX: Labor costs (LC) excluding community, social, and personal services, EGW, and mining.
- **LPI:** Local currency price index of economies relevant to Chile, implied in the EPI. Calculated based on the MPI (or CPI, according to availability) expressed in the local currency of the countries considered in the calculation of EPI and their share in Chile's trade, excluding oil and copper.
- Wage mass: Obtained by multiplying the real hourly wage index of wage earners, wage employment, and real hours.
- MER: Multilateral exchange rate. A measure of the nominal value of the peso against a broad basket of currencies, weighted as for the RER. For 2009, the following countries are included: Argentina, Belgium, Brazil, Canada, China, Colombia, France, Germany, Holland, Italy, Japan, Mexico, Peru, South Korea, Spain, Sweden, the United Kingdom, the United States, and Venezuela.
- MER-5: MER using only the currencies of Canada, the euro area, Japan, the United Kingdom, and the United States.
- MER-X: MER excluding the U.S. dollar.
- Parity price of gasoline: Reference cost of gasoline imports, calculated on the basis of quotes for similar conditions to Chile, in relevant markets (America, Europe, and Asia). Includes shipping, the insurance rate, duties, and other costs.
- **RER:** Real exchange rate. A measure of the real value of the peso against a basket of currencies, which includes the same countries used to calculate the MER.
- Rest of Asia: Hong Kong, Indonesia, Malaysia, Philippines, Singapore, South Korea, Thailand, and Taiwan.
- **ULCX:** Unit labor cost (ULC) considering only wage employment, and wages and output excluding natural-resource-related sectors.
- World growth at market exchange rate: Each country is weighted according to its GDP in dollars, published in the IMF's *World Economic Outlook*.
- World growth: Regional growth weighted by its share in world GDP at PPP, published in the IMF's *World Economic Outlook* (WEO, October 2009). World growth projections for 2009–2011 are calculated from a sample of countries that represent about 85% of world GDP. The growth of the remaining 15% is estimated at around 2.4% in the three-year period 2009–2011.
- FLAP: Short-term liquidity facility (Facilidad de Liquidez a Plazo)
- **Imacec:** Monthly indicator of economic activity (*Índice Mensual de Actividad Económica*)
- **Imacon**: Monthly construction activity index (*Indice Mensual de la Actividad de la Construcción*)
- **Imce:** Monthly business confidence index (*Indice Mensual de Confianza Empresarial*)
- IPEC: Economic perception index (Índice de Percepción de la Economía)
- MPR: Monetary policy (interest) rate

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**Juan Esteban Laval Z.** Legal Representative

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